A Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Care of Low Birth Weight Babies in Nursery among Staff Nurses in Selected Pediatric Hospital at Jaipur

Aarif Mohammad

Asst. Professor, Integral University, Lucknow, U. P . , India

Corresponding Author:
Dr. Aarif Mohammad
Asst. Professor, Integral University, Lucknow, U. P. , India
Email: draarifarman@gmail.com

Abstract

Introduction: Incidence of low birth weight in our country is very high. High risk mother should be identified early during the course of pregnancy and referred for confinement to an appropriate health care facility. Nurse has to offer support and comfort to mother and reassure her of her capabilities. The management of LBW babies includes hospital management and home management which are care at birth, thermal protection, fluid and feeds, kangaroo mother care, infection control and appropriate management of specific complications. This paper is a follow-up study after 25 years that was conducted in 2005 to find the changes and the causes of IMR in the same group of villages. This is a cross-sectional study conducted in villages of Jaipur in Rajasthan, India. Data on infant deaths have been analyzed at two different points in the same population with an interval of 25 years. The objective of the study is to evaluate the effectiveness of structured teaching programme on knowledge Regarding care of low birth weight Babies in nursery among Staff nurses in selected Pediatric hospital at Jaipur, Rajasthan.

Materials & Methods: The research design was pre experimental one group pre test post test design. Non probability convenient sampling method was used for the selection of samples. The instrument for the data collection was a structured questionnaire. Total 60 staff nurses were participated from JK Lone Hospital, Jaipur, Rajasthan.

Results: The mean post-test level of Knowledge score is significantly higher than the mean pre-test Knowledge scores that is 64.02% post test and 54.43% pre test with paired t=3.10 (at P<0.05 level of significance) and it is significant. By conventional criteria, this difference is considered to be extremely statistically significant. Statistical significance was calculated by using student's paired "t" test. There was significant association between the findings of Knowledge with

demographic variables. All variables were significantly associated with their knowledge score and it was estimated by ANOVA test. The major findings indicated that staff nurses had Moderate Knowledge in various aspects of care of low birth weight Babies in nursery before administration of structured teaching programme.

Conclusions: Later they shown adequate knowledge in all the levels of care of low birth weight Babies. structured teaching Programme was found to be a very effective method of providing information regarding care of low birth weight Babies.

Keywords: Effectiveness; Structured Teaching Program on; Low Birth Weight Babies

Introduction

Motherhood is a beautiful experience for a woman. Maternal health is important for the birth of a healthy baby. Birth weight is a major determinant of neonatal survival and future infant growth and development. Low birth weight (LBW) refers to an infant's birth weight of 2499 g or less at term.[1]

Birth weight is the initial weight of a dead or alive baby, best weighed in the first hour of life. Low birth weight (LBW) is a term used to describe babies who are born weighing less than 2,500 grams (5 pounds, 80 ounces). In contrast, the average newborn weighs approximately 7 lbs.1 Infants weighing less than 1500 grams (up to and including 1499 grams) are considered very low birth weight (VLBW) infants and infants weighing less than 1000 grams are considered newborns low birth weight birth weight (ELBW). types. The first are babies born before 37 weeks gestation (premature). Because birth weight is a function of pregnancy, a preterm infant is expected to be lighter. The secondary category of LBW infants includes infants with intrauterine growth restriction (IGUR). These children are malnourished (or small) because of the pregnancy in question. They are therefore referred to as low birth weight infants (SGA) or low dose infants (SFD).3 More than 80% of all newborn deaths in developed and developing countries occur in low birth weight infants.[2]

The risk of cerebral palsy is a common physical disability in Western European children and is higher in very low birth weight (VLBW) infants, who are born with a birth weight of less than 1500 grams, and in multiple pregnancies than in normal birth weight infants.[3]

Specific nutritional monitoring and nutritional supplements are recommended for low birth weight (LBW) infants to promote optimal growth and prevent subclinical nutritional deficiencies. Infant feeding practices need to be strengthened and integrated into existing health programs to reach all beneficiaries[4].

In India alone, 6-8 million underweight babies are born each year. The high incidence of IPN in our country is due to the greater number of children with intrauterine growth retardation.(small for dates), not premature.9 The main problems of low birth weight infants are asphyxia at birth, hypothermia, feeding difficulties, infections, hypobilirubinemia, apnea, respiratory failure, hypoglycemia, meconium aspiration syndrome, etc.[5]

Management of a low birth weight baby often includes care in the NICU, exclusive breastfeeding, temperature control, kangaroo care, special feeding (nutrition and fluids) -

sometimes with a feeding tube if the baby is unable to breastfeed, infection control, home care , and some other treatments for complications.8 Home care for a low birth weight baby is best done by the mother. Preventing premature birth is one of the best ways to prevent birth of low birth weight babies.Prenatal care is a key factor in preventing premature and low birth weight babies. Maternal and fetal health can be monitored during prenatal visits, since maternal diet and weight gain correlate with fetal weight gain and birth weight. Eating healthy and gaining weight during pregnancy are essential. The mother should also avoid alcohol, cigarettes, and illegal drugs, which, among other things, can contribute to poor fetal growth.[6]

Low birth weight is one of the major maternal and child health challenges in developed and developing countries. Lower birth weight; the lower the chances of survival. In recent years, the focus has been on ways to prevent underweight through good prenatal care and intervention programs, rather than treating underweight babies born later.[7] WHO estimates that around 25 million underweight babies are born worldwide each year, accounting for 17% of all live births, almost 95% of them in developing countries. In India, this accounts for around 26-30% of all live births, with more than half of these being births under government mandate. India wanted to get the problem under control and reduce the incidence to 10% by the year 2000, but has so far failed.[8]

An Indian newspaper reported that the current infant mortality rate (IMR) of 44 deaths per 1,000 live births accounts for nearly two-thirds of global infant mortality and half of global infant mortality. The study found that nearly eight million low birth weight babies are born in India every years. It is also said that 75% of newborn deaths occur in low birth weight infants.[9]

Objectives of the Study:

1. To assess the existing knowledge regarding care of low birth weight babies among staff nurses.
2. To determine the effectiveness of Structured Teaching Programme regarding care of low birth weight babies among staff nurses.
3. To find out the association between pre-test knowledge scores regarding care of low birth weight babies among s t a f f n u r se s with their selected demographic variables

Materials & Methods

Research approach: The research approach adopted for this study was an evaluative approach.

Research design: A pre-experimental research design with pre and post-test approach was used to this study.

Research setting: This study was undertaken in J.K. Lone Hospital, at Jaipur

Population: Population for the study was the staff nurses working in, J.K. Lone hospital at Jaipur, Rajasthan.

Sample: Sample of this study was 60 staff nurses working in Nursery; J.K. Lone hospital at Jaipur.

Sampling technique: 60 samples were selected by using convenient sampling technique.

Sampling criteria:

Inclusion Criteria: -

Nurses who were working in Nursery.

Nurses who were willing to participate in the study.

Exclusion criteria:-

Staff nurse who were not available during data collection.

Staff who had attended the same programme in last 6 month.

Results

A total of 60 patients with care of low birth weight Babies in nursery among nursing personnel

Section-1: Description of socio-demographic characteristics of samples

Table-1 : Frequency and percentage distribution of selected demographic variables

SL.NO	Demographical variables	Frequency	Percentage
1.	Age of the mother		
	a)21-25 years	25	41.7
	b)26-30 years	19	31.7
	c)31-35 years	12	20.0
	d)35 and above	04	06.7
2.	Gender		
	a)Male	32	53.33
	b)Female	28	46.66
3.	Educational qualification		
	a)GNM	22	36.70
	b)B.Sc. Nursing	23	38.30
	c)Post B.Sc. Nursing	12	20.00
	d)M.Sc. Nursing	03	05.00
4.	Total Clinical Experience		
	a)0-1 Year	22	36.70
	b)2-3 Year	18	30.00
	c)4-5 Year	19	31.70
	d)5 and Above	01	01.70
5	Total Experience in Nursery (In Year)		
	a)0-1	30	50.00
	b)2-3	22	36.70
	c)4-5	04	06.70
	d)5 and above	04	06.70
6	Any other Information Related to care of LBW(Conferences Seminars, Workshop)		
	a)Yes	18	30.00
	b)No	42	70.00

TABLE – 2: Percentage distribution of overall knowledge level N=60

Knowledge Level	% of score	Pre test		Post test	
		Frequency	Frequency %	Frequency	Frequency %
Poor	0-40	2	3.3	0	0
Average	41-60	39	65	0	0
Good	61-74	19	31.7	21	35
Very Good	75 and above	0	0	39	65

Table 3 Aspect wise knowledge effectiveness of Structured Teaching ProgrammeN=60

S. No	Area	Score	Pre-test (x)			Post- test (y)			Effectiveness (y-x)		
			Mean	Mean %	S.D.	Mean	Mean %	S.D	Mean	Mean %	S.D
1.	Items related to introduction & definition	2	1.71	85%	.49	1.81	90.5%	.39	0.1	5	0.10
2.	Items related to cause	3	1.03	34.33 %	.84	1.53	51%	1.01	0.5	16.66	0.17
3.	Items related to clinical manifestation	7	4.58	65.42 %	.84	4.93	70.42 %	1.10	0.35	5	0.25
4.	Items related to management	6	2.91	48.5%	1.18	3.45	57.5%	1.30	0.54	21.66	0.12
5.	Items related to care	12	6.10	50.83 %	1.25	7.51	62.58 %	1.80	1.41	15	0.55
	Overall	**30**	**16.33**	**54.43 %**	**4.62**	**19.25**	**64.16 %**	**5.62**	**2.9**	**9.66%**	**1.77**

Table4 Significance difference between pre-test and post-test knowledge scoresN=60

S.No	Score	Mean	S.D	Std. error	Mean difference	D.F	"t" table	
							Calculated value	Tabulated value
1	Pre-test	16.33	4.6	0.93	2.9	59	3.1078	2.0010
2	Post - test	19.25	5.6					

Table: 4 describe the comparison of knowledge score on care of low birth weight Babies in nursery before and after intervention. The post-test mean score was significantly higher than the pre- test mean score. The tabulated value of„t‟ score at 0.05% level of significance and 59 degrees of freedom is 2.0010 and the table value was less than the calculated‟ value (3.10)which represents the significant gain in knowledge through the structured Teaching Program. Thus it suggests that the STP has been effective in increasing the knowledge of staff nurses about care of low birth weight Babies in nursery. (p<0.05 HS)

Nursing implication

The findings of the study will help the investigator in the following ways:

The challenge that neonatal and pediatric nurses face is enormous. Scientific and medical inventions are helping to improve the care of underweight infants in kindergarten practice, which requires an improvement in the knowledge of nursing staff. The staff development

program through continuing education and teaching materials such as the Structured Curriculum (STP) are key factors in shaping the future of nursing. The study results have several implications for nursing practice, nursing education, nursing administration, and nursing research. The test result can be used in the following areas of care.

Nursing Practice: The STP prepared in this study is a way to improve your practice through appropriate knowledge. It serves as a guide for experienced and novice caregivers. This STP can be a way to guide and guide a continuing professional development program for nurses. Milestones can be highlighted and written on a chalkboard or chart in the delivery room and NICU for quick understanding.

Nursing education: Nurses should be encouraged to take special courses in the care of low birth weight infants. Specific courses and training programs should be organized within the Ministry. A structured curriculum serves as good teaching and learning material. More emphasis should be placed on the regular development and updating of the PTS. The curriculum for elementary and college nursing should detail the care of a low birth weight infant in a day care center.

Nursing Administration: This underscores the need for nursing administrators to employ performance assessments, nursing audits, guidance and nursing standards updates. Clinical expertise and experience help nurses assess what truly is the best evidence of neonatal care. Nursing leadership should strive to update the nursing staff's knowledge of the care of low birth weight infants in the nursery and to develop appropriate teaching strategies to ensure quality care.

Nursing Research: This is only a preliminary review of nurses' knowledge of caring for low birth weight infants in the nursery. There are many ways to explore this area. Further research can be conducted on factors influencing nurse knowledge, the care of low birth weight infants in nurse practice and the care of mechanically ventilated infants. The use of research results should be part of quality assurance evaluation to strengthen the profession as a whole.

Conclusions

As part of the study, 60 nurses received a structured curriculum. The program helps nurses expand their knowledge of caring for a low birth weight infant in the nursery. Ultimately, this helps caregivers in caring for underweight children in day care centers. The study results indicate that the nursing staff's knowledge of how to manage a low birth weight infant has improved, suggesting that the intervention program is effective in improving the nursing staff's knowledge.

Acknowledgements

Ethical consideration: Prior permission was obtained from the research committee of Jaipur Hospital College of Nursing, Jaipur, and Rajasthan. The participants were assured of anonymity and total confidentiality of information, and that any information obtained from them was solely for the purpose of the study.

References

1. Meharbansingh. Care of the Newborn. 6th edition. Sagar publication; 2004. p.56 57, 225.

2. Park K. Parks Text book of Preventive and Social Medicine" 18th ed. Jabalpur : M/s Bhanotpublis; 2007. p. 393-4.

3. B T Basavanthappa. Nursing Research: 2nd edition. Jaypee brother"s medical publishers P (Ltd); 2007. 92.

4. David Isaac E Richard moxon. Neonatal infection: 1st edition. Jaypee brother"s medical publishers P (Ltd); 1994. P 13

5. Gupte S. The short textbook of paediatrics. 10th ed. New Delhi: 2005. P.218 – 20.

6. The Nemours Foundations.[Online].1995-2011;Available from:URL: http://kidshealth.org/ parent/infections /common/neonatal infections.html

7. WHO Health Report On A Health Crisis. Health Action 2014 April;18(4):3.

8. Health Ministory of Rajasthan, Rajasthan Health survey report 2014 March; 12.

9. Http://Www.Emedicine.Com.Inc. 11.05.2005